Virginia WILDLIFE

MAY, 1955

VOLUME XVI *Price 15 cents* NUMBER 5

Opening Day on the Tye

High water, dogwood blossoms, basking sunlight in mountain clean air—and the occasional tug of a trout—are all a part of the opening day scene on better than 140 Virginia trout streams. (Season starts at noon on May 2).

Virginia WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia

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VOLUME XVI MAY, 1955 No. 5

In This Issue

	PAGE
Editorial: The Trout Brooks Call Again	4
Our Resource Estate	5
Trouting is a State of Mind	8
DOCTOR! What's Wrong with Our Patient	10
Conservationgram	13
Waste or Wise Use (Pictorial)	14-15
The Scourge of Wildlife	16
How Serious is the Bobcat?	18
Ramsey's Draft	21
New Virginia Predator Control Position	23
Drumming Log	24
Field Force Notes	26
Wildlife Questions and Answers	27
Back Cover—Trout Foods	28

Cover

National Audubon Society photo

In the spring the mating instinct of wild creatures takes on many forms. One of the most dramatic is the strutting and drumming antics of a male ruffed grouse on a drumming log.

PUBLICATION OFFICE: Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia

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FLORENCE BLANKENSHIP, *Circulation*

SUBSCRIPTIONS: One Year, $1.00; two years, $1.50; three years, $2.00 Remittances by check or money order to be made payable to the Treasurer of Virginia. Local game wardens will accept subscriptions or they may be forwarded direct to Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia.

VIRGINIA WILDLIFE is published monthly at Richmond 13, Virginia, by the Commission of Game and Inland Fisheries, 7 North Second Street. All magazine subscriptions, change of address notices, and inquiries should be sent to the Commission, P.O. Box 1642, Richmond, Virginia. The editorial office gratefully receives for publication all news items, articles, photographs, sketches, and other materials which deal with the wise use and management and study of Virginia's inter-related. renewable resources: soils, water, forests and wildlife. Since wildlife is a beneficiary of the work done by state and federal land-use agencies in Virginia, editorial policy provides for full recognition of their accomplishments and solicitations of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given the Virginia Commission of Game and Inland Fisheries and VIRGINIA WILDLIFE and proper clearances are made with authors, photographers, artists and publishers.

Entered as second class matter, November 10, 1947, at the post office in Richmond. Virginia under the act of August 24, 1912

Additional entry Baltimore, Md. July 1, 1954. Second-class mail privileges authorized at Richmond, Va.

The Trout Brooks Call Again

BECAUSE of a short military stint with the Organized Reserve your magazine editor will not be in a position to cover the opening day of the trout season on May 2 at 12 noon. This is regretful because it will mark his first failure to be out on opening day since joining the Commission back in July 1947.

Looking over the eight years of trouting in Virginia waters is bound to produce some mental impressions—some good, some not so good. A few of these may be worthy of comment.

Many trout fishermen I know have ceased to be trout fishermen, the reason given that Virginia's trout program has produced a situation which lacks both appeal and good taste. It's just a mad scramble on opening day, they say, with thousands upon thousands of meat-hungry individuals jockeying for elbow room on the streams to get a first crack at liver-fed, sluggish trout.

Well, in many ways, one can't blame the true trout addict for the way he feels. It is a natural reaction of many who look upon trouting as real sport, an art if you please, the so-called poetry of angling, and find modern trout fishing leaves much to be desired.

However, there are some things the modern angler must face or go without. We can't have yesterday's conditions in trout fishing anymore than we can bring the horse and buggy days back. Limited streams, good roads, fast transportation, terrific fishing pressure—all make for changed conditions. You can't have all anglerdom on Virginia's 140 or so streams on opening day without losing something. The thing to do then is make the best of a difficult situation—if you go on opening day—or wait till the fever subsides, as it surely will when the fish are reduced to some semblance of the carrying capacity of the streams. Then the enjoyment will return and you'll find the streams more to yourself. This, later-than-opening-day, or week idea, is something we have been preaching for some time and, if our purist friends will give the later dates a try we may still save some of our worthy trout fishermen.

And the Commission is trying to make trout angling more reasonable by better restocking methods and by fish management, and further improvement will come. The system of restocking in closed areas and allowing the fish to filter out is working well. This year for the first time the artificial feeding (breading, etc.) of fish has been outlawed—an excellent rule. This should help prevent congregation of great swarms of fish and perhaps allow the trout to better distribute themselves.

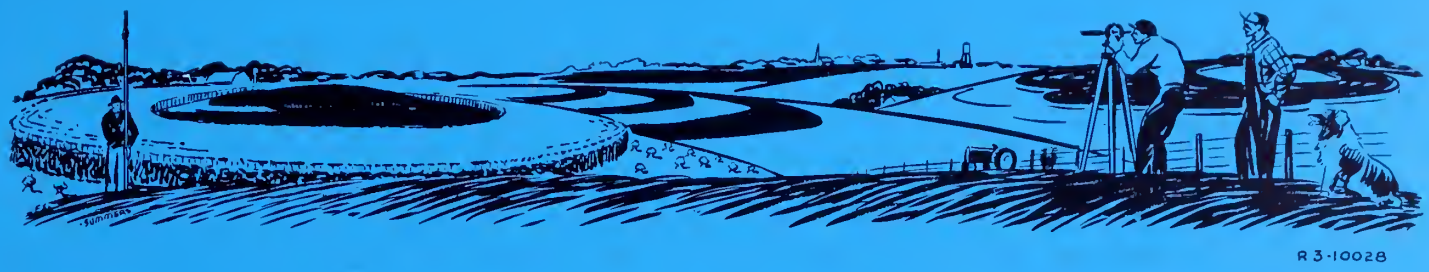
This year too for the first time, parts of your trout streams have been set aside for artificial lures only. The fishing regulation for Shenandoah County reads: "In Little Stony, Laurel Run, Pasage and Cedar Creeks it shall be lawful to take trout with artificial lures only in Little Stony Creek above the Woodstock Water Supply Dam, in Laurel Run above the Markley Place, in Passage Creek above the bridge at the road leading to Smith Creek and in Cedar Creek at the National Forest boundary."

This should please the artificial fly men, for they have long been desirous of getting part of some streams set aside for artificials only. After all, they say, isn't the philosophy of trouting to get maximum sport for each fish taken? If so, then why not admit it and make regulations so as to make trout fishing the best sport possible under present day conditions.

While in democratic America everyone that is properly licensed has the privilege to go out and fish and we may always have throngs of people to contend with on opening day, there is every reason to expect that with better fish management and *better human management* many of the difficult problems of today will be partially solved. This is something that researchers and exponents of better fishermen control will have to work out. Better trouting is possible in Virginia, but it will come as a result of hard work on the part of the Commission, its staff, and the whole-hearted cooperation of anglers. Better stocking methods, more and more equal distribution of fish, more closed areas, more artificial waters, stream improvement, better harvesting regulations . . . are all bound to work an improvement on Virginia's trout fishing.

As to trout being entirely liver fed, and poor fighters, this isn't altogether true. Virginia's brook and rainbow trout at the hatcheries are fed a balanced mixture of food, mostly ground fish (some liver to be sure) and after they have been released are allowed to forage for themselves. The longer in the water and the more acclimated to natural conditions they become, the more spunk they develop. Though they may lack some of the high quality of wild fish, they are still fun to catch as attested by the 75,000 or more anglers on Virginia's streams on opening day.

As for your scribe missing opening day, well, each man can make his own date for trout during the four and a half months long season. I'll make my opening day when a late hatch of mayflies starts the speckled beauties tailing at the foot of the pool and when a Quill Gordon drives the squaretails into somersaults and your heart pounds drumbeats in your temples.—J. J. S.



OUR RESOURCE ESTATE:

Why Conserve It?

By PAUL M. DUNN*

THE MAJOR ASSETS of each and every nation of this great world are its resource values: the human and the physical. The wealth and the development of any country depend on the kind and supply of physical or natural resources, and the ability of her people to develop, manage and utilize them, wisely. For the purpose of this paper, I shall refer to the natural resources group only: those usually called the organic or the renewable resources.

Over the past many years, the people of communities, states and the nation have capitalized on the wealth of the land, the productivity of the soil and of the climate, through annual or periodic crops. Currently, the situation has not changed, and I feel certain that the future will continue to be the same.

The words "conserve" and "conservation" have broad and varied meanings; it is often a matter of interpretation. Interest in the topic is evidenced by the controversial points of view. One can find many ideas on the subject appearing in articles and books, almost daily. Each expounds certain aspects of the words and their usage by various persons and groups, teachers of English, biology and economics, representatives of public agencies, private companies or associations, and laymen: all experts in their specific fields of endeavor.

If you use the Latin derivation of the word conservation, it means "to keep guard." However, in Spanish, conservation means "with service." I prefer the latter.

A recent definition that appealed to me is: "Conservation might be likened to a double-lane highway to the far end of preparedness; one lane supporting the military organization by maintaining the required supplies of food, fiber, lumber and materials; the other supporting the faith and confidence of the people in democracy by making the land a more productive and pleasant place in which to live."

*Paper presented at the Twentieth North American Wildlife Conference, Montreal, Quebec, March 14, 1955. Mr. Dunn is technical director of forestry, St. Regis Paper Company.

To whom and to what would we apply the term?

William Van Dersal recently made this statement: "Conservation has been applied to all the natural resources: wildlife, forests, grass, minerals, oil, water, food, and other materials such as forces, beings, money, electricity, energy and matter." Professor Emanuel Fritz of California would include in the list "the nation's and the individual's time and efforts." I agree with this thought.

Around the turn of the century, our thinking on the subject stressed the "keeping the guard" idea, and it still is paramount in the minds of some people. To most of us, the word means wise use of our resource values, the restoration and careful management of the renewable values, and the establishment of a workable program that will make them serve as a whole and to the fullest advantage, perpetually.

We accept the fact that there are differences of opinion on the subject. As some said, "That is what makes a horse trade," or as the old Piute Indian said, "No like-um all men think same, then all want my squaw." However, we all will agree that we need a better understanding, not only of the basic problems, but of each other's point of view. We need information.

Owen Young, a business statesman in the industrial and natural resource field, was quoted as saying, "Facts are the least developed of our natural resources." Certainly that is true. Essential facts are frequently overlooked or misconstrued in the consideration of the debate of our natural resources, particularly when they are related to so-called conservation issues. This becomes doubly true when we advance the basic American theory that these resources should be put to wise and conservative use through our private enterprise system and, wherever possible in the public interest, private ownership as well as private use should be promoted in order to build a productive, tax-paying economy. The right kind of facts are important. Josh Billings once commented in this vein: "It ain't that people are ignorant; it's that they know so much that ain't so."

We are here today to take a new look at some of the oft-repeated facts, review the basic problems, and listen to reports of progress.

I believe that it is safe to say that we could all agree that a sound conservation policy for any nation would contemplate the use of its natural resources with due regard for the present public need, the rights of posterity, reasonable preservation of natural beauty, and the long-term productive requirements of the people for food and other materials. The solution of problems as they arise should, in my opinion, be approached from a business viewpoint and not from a selfish or a provincial standpoint. We should accept a certain amount of sentiment in the operation, but not to a major degree. Solutions should be based first of all on what is best for the whole country over a long term without doing violence to local economies which conform to historic patterns. I can see some minimizing of the importance of national borders even.

Multiple use of the public lands which encompass these natural resources should be the watchword, i. e., timber, forage, water, wildlife and recreational uses. Local and state governments should have a prominent part, along with the users, in formulating and regulating the productive use of these resources. While private enterprise is endowed with certain automatic controls, the ultimate promotion of good conservation practices must be accepted by all private resource owners.

The ownership of the lands does create certain problems, but they are not really paramount. Ownership just identifies the major stockholders and places the responsibility. The objective should be to administer and manage both types of ownerships, public and private, with all single-purpose programs modified in most instances. Only in this way shall we leave our descendants a fully productive land in which they can continue to make and enjoy a living rather than one pock-marked with extensive tracts of unmanaged cut-over or uncut areas.

Full and complete information is essential to the best and most complete development of the resources as well as proper utilization. This is particularly important in view of our national defense measures. In respect to this point, I believe that we agree that we are thinking of a hemispheric defense. In the opinion of many, the western hemisphere could be self-sustaining from the standpoint of strategic materials. If this is a probability, we should be certain, and then protect our resources accordingly. Just as the matter of a dependable national inventory of our forest resources is deemed essential to resolving many of the pertinent questions, so it is important that an early attempt be made to re-classify many of the public lands. Over the period of years, since many of the current uses were designated, the situations, both economic and social, in many parts of the country have undergone a change. The demands of both public interest and private industry are not the same today that they were 50, or even 20 years ago.

In answer to the question WHY? Here are some answers:

Patrick Henry had a second vital statement, "Since the achievement of independence, he is the greatest patriot who stops the most gullies."

Bernhard Fernow once said, "A nation may cease to exist as well by decay of its resources as by the extinction of its patriotic spirit."

Ex-Governor Sherman Adams of Vermont stated, "The practice of conservation is an act of patriotism, and the understanding of it, the preaching of it, and the contri-

bution to it, are parts of the fundamental duties of a citizen of a free society."

Exploitation is not the only means of resource destruction or depletion. By non-use, the values may lose their utility. Hoarding may contribute to improper conservation. The problems associated with the use of a resource with the resulting non-use of certain phases of the resource must be recgonized. This non-use may not necessarily create a waste of values. The deferred capitalization may not be unwise as it may be very necessary in respect to national development and national welfare. If we, as a people, wish to maintain and perhaps improve our standard of living, we must appreciate the probable cost. Two disastrous world wars have been fought and won within the past 40 years. Our natural resources were important factors in the successful ending of those conflicts. All of us must realize fully the vital importance of the necessary resource materials and the need for their perpetual conservation.

Nature generally maintains an equilibrium between the land and the living things that it produces, whether animals, grass or trees. Man, by proper understanding of the capacities of the soil, can utilize fully the various crops. Periodic accounting or checks will determine the maximum utilization of the various organic resources. A game census, a timber growth check, a grazing survey or water measurement will provide adequate facts for the periodic harvests. It is soon evident if the owner is disregarding the land's resource potential. Several very vivid examples in past civilizations, namely China and North Africa, have told their stories of over-use and land abuse.

What is needed is a re-orientation of thinking, and a re-examination of the obligations of a citizen to his state. It would appear that at times there has been a misunderstanding of the meaning of democracy. It does not mean irresponsible freedom. It means a way of life in which the freedom of the individual is secured by his unselfish support of the whole group, that is, of the state. One of the most important functions of this support is the proper stewardship of natural resources by the individual for his own welfare and with others for the welfare of the nation. However, nothing but chaos can result from the efforts of the various individuals working his or her separate scheme of resource utilization. It requires, instead, full coordination of efforts by all. This can be brought about by proper planning and education.

There is no question in my mind that the solution of our many problems in the field of conservation rests in the realm of education. Basically, the problems relate to a proper appreciation of our various resource values in respect to our present and future needs. That appreciation can best come through better understanding; it is a matter of education of all the people and chiefly of our youth. The young people are unusually responsive and will benefit most from the conservation measures.

So the answer to the question is this: "The rise and fall of certain nations was closely correlated with the treatment accorded their natural resources. We have concrete evidence of outstanding development on the North American continent during the past three centuries due to bountiful resources. The forecasts of population increases, public land-use trends and industrial expansion within the next 20 years make it imperative that we conserve our resource estate, so we and our children may maintain the values and have the opportunity to continue to enjoy our currently high level of civilization.

TROUTING is a State of Mind

By KENNEDY LUDLAM

IN THE happy paradise of anglers there is a special corner reserved for the trout fisherman; a corner carefully fenced off and protected from trespass by followers of angling of the coarser sort—by which I mean to imply that trouting is more of a state of mind than an easily definable division of a great recreation.

A trout fisherman enjoys his chosen line of endeavor at any time of year, for when the season is closed, and the wintry winds whistle about the chimneys, he foregathers with like-minded cronies and relives priceless moments a-stream, creates fearsome fly patterns from all manner of millinery, and carries on endless arguments in support of his particular cult, be it dry fly, wet fly, streamer, dapping, or bait fishing. And the placing of bait fishing at the end of the list doesn't by any means suggest that an equal amount of dexterity does not attend the skilful presentation of worm, grub, or beetle in such manner as to confound the wiliest char.

Trouting is a virus which, lying dormant for a few short weeks in late summer and early fall, begins its delightfully pleasant infection toward the end of January, starts a low-grade fever towards the middle of March, and increases its tempo to a frantic delirium as April gives way to May Day, on which date life begins for the Virginia trout fisherman. And delirium is not too strong a term.

We six were gathered about the banks of a famous pool a few moments before noon on a well-remembered opening day. All but one of us had been nervously checking our equipment. Rods were strung and unstrung, guides were examined for real or imagined looseness in wrapping, attentive ears were laid to ferrules to detect the slightest signs of a rattle, extra gear was packed and repacked with worried care lest something of vital importance be forgotten and desperately needed when the needer was several miles downstream from the source of supply. Shakily stuffed bowls spilled unheeded crumbs of tobacco from pipes held in chattering teeth, and myriads of matches were used for a chore requiring only one at any other time of year.

The only calm soul in the party was Doc. He was a veteran of half a hundred opening days, and not for him was this childish exhibition of the jitters. He lay back on the bank peacefully puffing away, sending perfect smoke rings up into the warm spring air.

One minute to noon, and still Doc lay relaxed and unworried, his tackle spread about him on the grass. He watched with considerable amusement and a not-too-well concealed condescension as the rest tested the stream-bottom with boot toe and wading staff. Presently the great moment arrived, and Doc leisurely bestirred himself. Carefully he jointed his rod, lining up the guides with slow, meticulous care. His line went smoothly through the loops, and leader was never tied with steadier fingers, nor fly attached with tinier, more perfect knot. He hitched his creel to his shoulder, picked up his rod, and strode purposefully five steps into the brook.

At the second step, an expression of pained surprise crossed his face; at the third, acute discomfort and unbelief appeared; at the fourth, apologetic chagrin; and by the time he had completed his fifth stride into the icy water creaming around his knees, his features bore an expression so crestfallen that roars of laughter echoed up and down the pool. He had forgotten to pull up his boots!

What does trout fishing mean to you? To some, fortunately few in number, it means an opportunity to fill the freezer with fish. Your meat hunter is unluckily more prevalent on the water than he is in the field, and it's not unusual to find your fisherman—I will not call him a sportsman—wielding a heavy trolling rod and sinker beside some pool trying to extract newly-planted trout with chunks of liver impaled on a 3/0 hook. Let's pass over him quickly. Were the fish suckers, carp, bowfin, or gar, he would still be there with gear of a weight to insure that no fish unfortunate enough to sample his bait escape. He is no trouter.

To some it means laying out many feet of line in beautifully accurate casts. Here is a real angler. He's not so much concerned with catching a fish as he is in performing perfectly the technique attendant to his type of fishing. Salute him, fellow anglers, he is a sportsman.

The escapist seeks an isolated mountain stream where nature conceals a surprise beyond every bend of the brook. True, his main object is to lure a gullible rainbow from the depths of a green pool shadowed by an overhanging balsam, but not the least of his anticipations is the possibility of coming upon a sly mink or unsuspecting muskrat working the banks of the next pool, oblivious of the angler's approach whose cautious steps are absorbed in the cheerful clatter of crystal clear water.

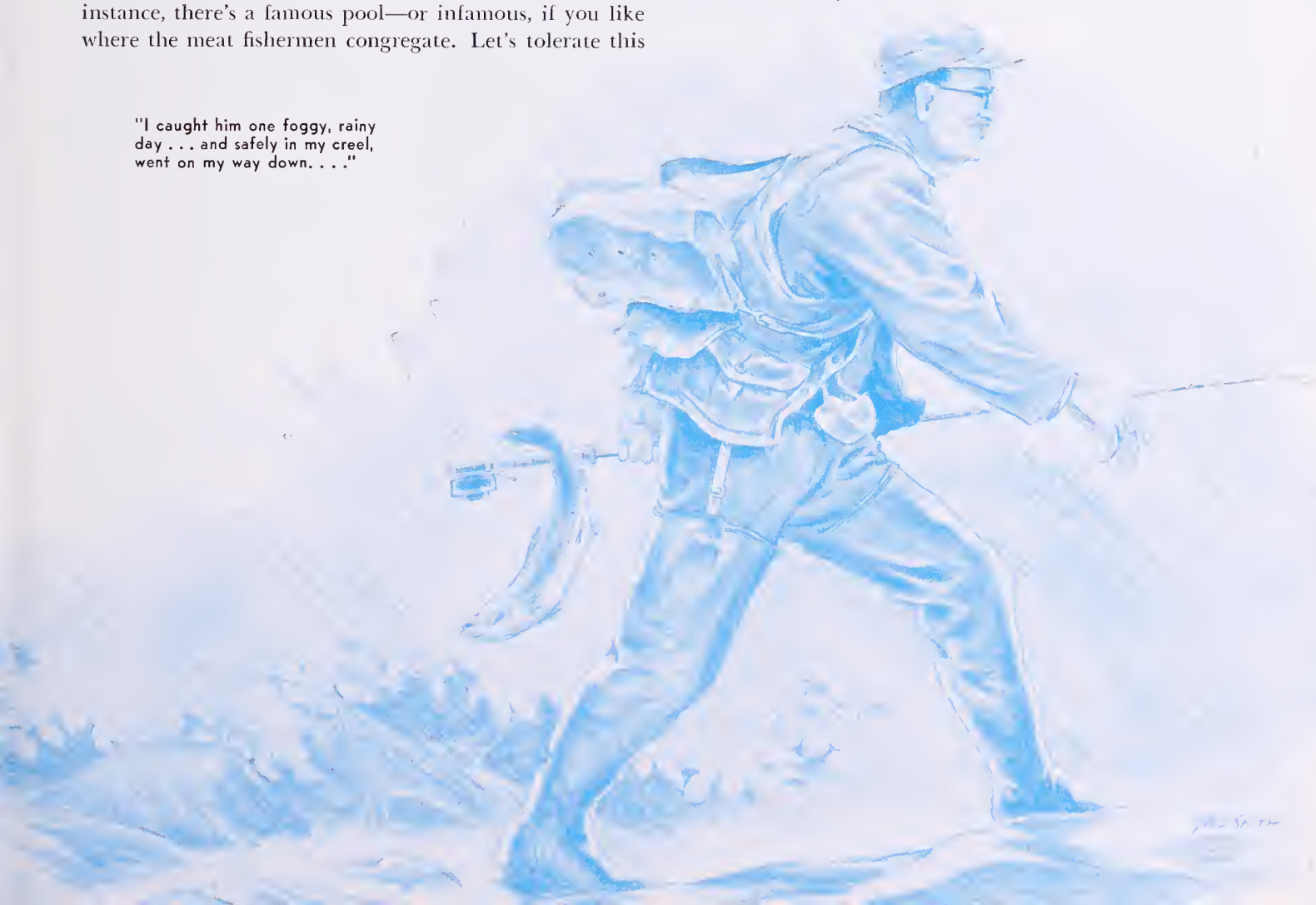
The contemplative fisherman seeks the meadow brook where he can fully enjoy what is so aptly described in the "Bird Bride": ". . . days when the forest was an emerald cup, filled to the brim with wine of mellow weather." Action is not fast along these quiet runs, and he waits relaxed for the first dimple on the placid surface to indicate the imminent arrival of a hatch. Dry flies are in order now, and the delicate filament of a 4-X tippet sails out to drop with scarcely a ripple, sometimes to float gently until drawn out for a new cast, sometimes engulfed by the vicious smash of a hungry trout.

Do you think you can't find all these different kinds of water in the great state of Virginia? It takes a bit of looking, and some traveling, but you can find them all, and most of them are readily reached by motor car. For instance, there's a famous pool—or infamous, if you like where the meat fishermen congregate. Let's tolerate this pool, since it keeps the objectionable characters away from the pleasanter paths of the forest. For the first few days of the season, the meat anglers line this pool and its attendant dam, elbow to elbow, snatching out fish with their derrick-like gear, crossing lines with their competitors, and generally violating every accepted tenet of good manners and sportsmanship. No, this congregation of bait-dunkers is not for us. Let's go somewhere else.

Do you like to lay out lots of line in a fast-running, knee-deep river with unexpected shelves, holes, and drop-offs for the unwary? Jackson River or Back Creek in Bath County is the stream for you. The fish strike in this water even in July and August when the first rush of the faithful has dwindled to a handful of devoted artists. If you fish after July 1st, you may even connect with a fighting smallmouth. Who cares? You can't tell what you have till he's near the net, and then you've had your fun. Turn him loose to give you a new thrill another day. Spinners and streamers are the recipe for this water, and if you must spin-fish for trout, this is where you can do it.

Are you the escapist? Try White Top Laurel, hard to reach, hard to fish, but richly rewarding in all those intangible elements that go to make up a satisfying trip in the outdoors for the real sportsman. Less rugged, but equally beautiful are Big Piney and Tye River near Lovingston. Not big water, this, but lovely to fish. Of the same sort are the many streams flowing east from the Shenandoah National Park below Sperryville.

(Continued on page 23)



"I caught him one foggy, rainy day . . . and safely in my creel, went on my way down. . . ."

DOCTOR!

what's wrong with our patient?

By WILFORD L. MILLER

ARE YOU ONE of the thousands of hunters who's been asking: "What's wrong with our game supplies?" If you have been tossing that question around, you've not been alone. Perhaps you've been damning the predators, including the foxes, for killing all the "quail." Or maybe you're critical of the activities of your conservation department in not providing more upland game to shoot.

And if closed seasons do not increase certain species, what will? That's the $64 question we're going to take up now.

Laws and constant rigid enforcement with well planned hunting regulations each year are important, but restricted hunting seasons and bag limits cannot increase or perpetuate wildlife populations that are not being produced.

Each year finds a tremendous increase in the army of sportsmen seeking recreation in the fields and on the lakes. Each year the hunter finds it harder to find a place to hunt and to bag the game he is seeking. The ranges of many of our good birds—quail, wild turkey, woodland grouse, and prairie grouse — are constantly diminishing. Bag limits and average length of hunting seasons are gradually decreasing.

An analysis of the game situation in most states shows the importance of education and the need for some long-range planning based upon the physical needs of wildlife. Here is a good article written by a well-known biologist who knows what the ailment is and prescribes a remedy. The facts disclosed here are as true today as when they were first published in *Virginia Wildlife* seven years ago.—Ed.

An analysis of the game situation in some sections of the country indicates a need for a change to a long look ahead—a change that will include an extensive program of conservation education and a "back to the land" movement to restore natural habitat conditions wherever this is practicable. After fair trials over many years in all parts of the country, expensive practices like artificial propagation and continual restocking should be discarded with few exceptions.

We've got to get back to the source of all wildlife—the LAND. For years, we've been trying to increase game by methods that just aren't rational—the proverbial scattering of grain by the wayside and on the rocks where a crop cannot be expected—yet vainly hoping that some of it will yield returns. The logical first step is to prepare the seed bed, then to plant the crop. The first step must be the provision of adequate food and protective cover for the birds; and the sooner sportsmen and conservation departments realize that, the sooner we shall be getting somewhere in the problem of increasing game. Agriculture and industrial practices have been destroying the factors of the environment needed by wildlife — protective cover, nesting and wintering grounds, and a natural food supply. Unless these essentials are restored the hunter must be content to substitute clay pigeons for the whirring wings of the quail, the grouse, and the pheasant. In most places a national program of conservation will find room for both wildlife and industry. One does not require complete sacrifice of the other.

All of our winter studies have shown the great need for cover. Careful planning must be used in arranging cover patches of the type best suited to a given locality — whether they be trees, shrubs, sweet clover or other desirable plants. A complete new program of tree planting may not be necessary. Existing groves should first be improved—a saving of time, money and wildlife.

The widespread practice of feeding the birds in severe weather is only of temporary value at best. It is not the long-term solution to preserving or increasing population which involves a constant supply of natural food in connection with cover.

Game management experts generally agree that many of their activities, besides winter feeding, are a waste of the sportsmen's money and are not producing results. Another illustration is the releasing of pen-reared game birds year after year in places that cannot support them. One state found that one per cent of pen-reared quail showed up in the hunters' bags. Another found no returns. Similar results have shown up in the case of hatchery-reared fish. Then there is the bounty system for predatory control. Leaders from nearly every state admit that it is an expensive and ineffective method for controlling predators, yet state legislatures continue to appropriate large sums of money for this purpose.

Why do states continue such practices when they are aware of the facts?

Several state conservation leaders gave their reasons at

the Ninth Midwest Wildlife Conference held in Lafayette, Indiana, December 9-11, 1947. Foremost was the explanation that the public was not yet ready for carrying out the findings of the research man. For example, one game department knew that a hunting season should be opened on does in a certain deer territory because of inadequate food supply. Public sentiment was against any killing of does, so the season remained closed and many of the animals died from starvation the following winter.

In other words, research advances in game management are several years ahead of the publicity and educational programs needed to acquaint the public with the facts. Should the game managers yield to public opinion for ten years, waste the money and the wildlife resources of the states, then admit that they knew long ago that a different policy should have been adopted? The medical profession would progress rather slowly if the doctors would let their patients prescribe the treatments. Why should highly-trained game technicians allow the public to control their decisions in the field of wildlife management?

Undoubtedly, one of the greatest needs in the conservation field today is a comprehensive educational program. Public opinion must be moulded to accept the facts of research so that game managers will not be hampered in their work. Public opinion will then exert pressure in the desired direction of securing funds and legislation needed to carry on wildlife restoration on a national scale.

This conservation job is not one to be left entirely to the state and federal agencies. The sportsmen's role is not fulfilled when he turns in his license fee. A criticism of sportsmen's clubs has been their lack of interest in the welfare of wildlife—except during the few weeks prior to the hunting season or when a blizzard or some other major catastrophe suddenly endangers their game birds and animals. Nevertheless, there are many leaders in wildlife clubs who are anxious to do something constructive throughout the year. Some clubs maintain hatcheries for raising birds. During winter months they may spend considerable time and money on a feeding program. Other projects are carried on which are not too productive in the sight of game managers. The fault lies not so much with the sportsmen as with the leaders in game management for failing to direct their activities into the proper channels.

What can you sportsmen do, in cooperation with or in spite of your conservation department? Your money and efforts have not produced more game, so it's time to find out why.

First, get the FACTS of the management of the species of wildlife in your state instead of drawing your conclusions from propagandists and "barber shop" game managers. Consult with leaders from your own state and from those of other conservation agencies. Keep posted on current findings in the field of wildlife research. Have well-informed speakers at your sportsmen's meetings. Don't be swayed by the sentimentalist who wants none of the wildlife crop harvested nor by the meat-hunter who is concerned only with an open season and a big bag limit. Your organizations constitute a powerful pressure group to influence your legislatures and conservation departments into doing the right thing.

This job of habitat restoration for wildlife is going to cost a lot of money. How about reversing the usual procedure and having the sportsmen's groups take the initiative in demanding higher license fees and raising the price of the duck stamp? More funds will be needed each year to keep our hunting privileges. Few of us realize how much we get for the purchase price of a hunting or a fishing license. A couple of dollars will buy days and weeks of outdoor recreation — the best that money can buy. Does any other sport give you comparable returns for your investment? Why not raise the license fees, the price of a single box of shotgun shells or the price of one admission to a baseball game, then see that the money is used in a way that will produce more game birds?

The national trend is toward the purchase of more land for refuges but the refuge program in itself is not the answer to increased populations of most wildlife spe-

Best answer to date on how to increase game is to provide wildlife with the basic necessities of life: food, cover, protection.

Bicolor lespedeza planting is one partial answer. Quail are attracted to natural cafeterias like humans to the dinner table.

Where adequate food and cover is present native rabbits will multiply.

Hunting will be good where the birds feel safe and have plenty to eat.

cies. No doubt refuges have an important place in a restoration program, provided they are located in strategic places. In areas of heavy hunting pressure, rest areas are definitely needed. It is doubtful, however, that the states or the federal government could ever acquire enough refuges serving as breeding grounds to increase noticeably the populations of either waterfowl or upland game birds.

This brings us again to the key to restoration of most species of wildlife—back to the land and the farmer. Our wildlife is a product of the soil. Only the farmer can modify his agricultural practices to restore to wildlife that which has been taken away—natural cover, nesting grounds, and food. Obviously, there is no object in trying to increase wildlife by artificial stocking if the land will not support the species.

Attempts at farmer cooperation often fail because the farmer was expected to give something for nothing. The farmer cannot be expected to change his farming methods merely for the sake of wildlife and the sportsmen. Game birds may be a nuisance to him—and the only results he observes are the hunters who tramp his fields, cut his fences, and endanger his livestock.

If the farmer cannot realize a cash income from wildlife on his land, there should be other tangible benefits to him. In some states the adoption of state-wide conservation practices has resulted in increased game habitat, with mutual benefit to the farmer and to wildlife. With the help of the Soil Conservation Service, the Forestry Service and other agencies, each state department of conservation must work out its own farmer cooperative program, depending upon land usage, species of game, and other factors.

Incidentally, in carrying out extensive habitat improvement programs, the game technicians themselves may find that they have not done enough research and experimentation along this line. Just what are the most desirable types of cover for nesting, for escape, for protection during severe winter weather? What species of plants should be used, what should be the size and the shape of the plantings? What are the limiting factors for each species in a particular locality—food, nesting cover, winter cover, predation?

Many other states have started or are planning long term basic programs of habitat improvement—a "back to the land" movement that should be a guidepost to the effective preservation of our national wildlife resources.

Conservation Quotes

"Society rests on its resources—its fields and rivers, its lands and its sunshine, its minerals and its trees. And society through ill-chosen or ill-directed efforts can destroy itself through destroying its resource base."

"It is time that we face about and reorient education toward the process of engineering a permanent and enduring society. Foremost among the problems requiring immediate attention and frontal attack is the waste of our natural resources—our physical and biotic wealth."—*Geo. T. Renner*

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

LAKE BRITTLE STOCKED WITH BREAM AND BASS. Lake Brittle, in Fauquier County, last completed public fishing pond of the Commission of Game and Inland Fisheries, has been stocked with 10,232 adult bass, 6,000 adult bluegill bream and 16,000 fingerling bream, making a total of 32,232 fish stocked. To give adult bass and bream an opportunity to bring off a spring and early summer hatch, fishing will not be permitted until June 15, 1955. On that day it is expected that the 77-acre lake will be dedicated to public fishing in the Fauquier County area.

SHENANDOAH, BATH AND AUGUSTA COUNTIES WERE TOPS FOR HUNTERS. During the 1954-55 hunting season, Shenandoah led with a deer kill of 1381, Bath was top county in the number of turkeys killed which amounted to 145, and Augusta with 80 bears killed was the leading county in that category. Counties west of the Blue Ridge Mountains were ahead of counties east of the mountains in the total deer kill, 7373 to 6695. The same was true of the bear kill, 231 to 39. But eastern counties reported 1561 turkeys bagged in comparison to 466 in counties west of the mountains. Squirrels killed are believed to have been about the same. More rabbits, more quail, most doves and practically all of the waterfowl were taken, as they are each year, east of the Blue Ridge.

DATE FOR ESSAY CONTEST CEREMONIES SET. May 20 will be the big day for top award winners in the Eighth Annual Wildlife Essay Contest, sponsored jointly by the Commission of Game and Inland Fisheries and the Virginia Division of the Izaak Walton League. Governor Stanley will present awards to the top winners in each grade from 5 through 12 and the $400 college scholarship in grade 12 at special ceremonies to be held at the Capitol in Richmond. Winners will be guests of the Commission and the League at a luncheon and will be taken on a tour of the city. There was an overwhelming response this year, both in the number of schools entered and the total of essays submitted.

NEW STOCKED STREAM LIST OFF THE PRESS. The current list of Public Fishing Waters of Virginia has been reprinted from the Commission's new publication, Freshwater Fishing and Fishlife in Virginia, and is available without charge by application to the Commission. This includes a listing of streams and impoundments by county, the acreage of impounded waters, boats available, and species of fish stocked or present.

ARTHUR GODFREY PLUG BRINGS FLOOD OF MAIL. After Arthur Godfrey mentioned Philip Allan's article, When You Build Your Fish Pond, which appeared in Virginia Wildlife, the Education Division was deluged with requests for the February issue in which it appeared. Fortunately, the article has been reprinted as Educational Leaflet No. 7, or it would not have been available to so large an interested public.

STREAMS OF SHENANDOAH NATIONAL PARK TO REMAIN CLOSED IN 1955. Superintendent Guy D. Edwards has announced that all waters of Shenandoah National Park will remain closed to fishing during the current season. The decision was reached after biologists of the U. S. Fish and Wildlife Service revealed that further, serious depletion of the fishery stocks in park streams had resulted from the severe drought of 1954. The series of droughts which began in 1952 has greatly impaired the native trout populations. Hurricane Hazel flood waters further reduced the numbers and damaged the fish-carrying capacity of the streams. The very limited population of adult trout must be preserved to spawn in the fall. Meanwhile fingerling brook trout will be stocked experimentally in 14 streams in May or June to determine their growth, survival and contribution to the restoration of trout populations.

WASTE or

which s

A great decision faces the American people: shall we continue to destroy our resource base and become a have-not nation . . .

TOP LEFT: Soil wastage is the product of carelessness and ignorance; TOP RIGHT: A powerline right of way can be unproductive to wildlife; LOWER LEFT: When woods burn everyone loses; LOWER RIGHT: Most floods are a direct result of land mismanagement.

WISE USE

l it be?

or shall we use our natural resources wisely for the benefit of all our citizens—now and tomorrow—in a free society.

TOP LEFT: Wise land use involves using each parcel of land for its highest productivity without impairment to future supply; TOP RIGHT: A power-line planted to bicolor for quail is one example of wise use. So is tree farming (lower left) and carefully managed waters (lower right).

Wildlife's—and man's—great enemy—fire.

The SCOURGE of Wildlife

By ED FURLOW
Virginia Forest Service

U. S. Forest Service photos

IT WAS hot that day late in May. It was excessively hot and windy. High up in the cloudless sky a navy jet was winging its way westward over the York Peninsula. It made a beautiful sight with its swept-back wings against the blue sky. Suddenly the steady roar of its motor changed to irregular coughing. Immediately the plane seemed to lose direction. As it faltered, a black object popped from the jet. Seconds later, a black figure was swinging to and fro from its parachute. The roar of the plane ceased as it gracefully arched its way downward in an ever-steepening glide. It crashed into the forests, snapping off trees like a farmer scything grain, ripping itself into dozens of fragments before bursting into flame and plowing its way into the ground. Silence prevailed at first, with a tinkle and a bang here and there, as fragments of the plane slipped out of trees and fell to the ground. Then an ominous crackle developed into a hissing roar and the burning jet spread its ever-increasing hot fury to the surrounding forest. Another forest fire was started.

A jet may bring fire to the woods with an unavoidable crash, but you and I *can* leave fire at home when we enter the forests to hunt and fish. Brush burners and cigarette flippers are notorious causes of forest fires, too. A little care exercised by all of us would prevent forest fires and would give our wildlife a chance.

People are constantly asking, "How can we increase the number of our favorite game birds and animals?" Well, there are two ways. One way is by making accessible to wildlife the food, proper cover, and breeding places that it requires. The second is to keep fire out of the forests.

A forest fire is a terrible thing to wildlife, just as it is to humans. A wild fire destroys the home and livelihood of wildlife just as it does our own. Let's look into this matter further. If your furnace blew up in the dead of night, how much of a chance would you and your family have to escape with your lives? Are you sure that you would survive the blast, the smoke, the poisonous gases? If your place of work should be destroyed by fire, how long would you be laid off? One week, a month, or would you have to look elsewhere for a new job?

The wildlife we love to hunt and the fish we like to catch face the same problem. Fire running through the forest destroys not only the home of wildlife, but its young, especially the eggs, the newborn, the suckling young. Added to this critical and tragic loss is the loss of their resting and roosting and play areas.

Not long ago during a particularly vicious small fire in York County, I noticed that a couple of turtles had gotten thoroughly fried by the fire. Without thinking, I mentioned it to my young son, aged four. He thought the situation over, started to sniff then to bawl. He began to cry as if his little heart would break. Between sobs, he gave me instructions to go back to the woods, to gather up all the bunnies, squirrels, and birds, and to bring them home where they would be safe from the forest fire. It took me quite a while to calm him down and make him understand that animals do not like to leave their forest home and would not want to live in his house with him. Needless to say that after this experience I did not tell him about the rabbit which was on fire from end to end and which jumped across our fire line and spread fire for a hundred yards before he dropped. I did, however, tell him about a more fortunate bunny that came hopping out of the underbrush wreathed with smoke and stopped in the middle of the fire trail, sat down, sneezed, hopped a few yards farther, stopped, sat down, and

sneezed again, and then dashed away.

People frequently comment that unless the forest fire is hot enough to consume the big trees it is not a bad fire. This is wrong. It does not take a crackling fire racing through the tops of trees to destroy the food and cover of wildlife. It does not take a large fire, either, to turn a hollow den tree into a roaring furnace. Even a small fire can—and will—do damage.

It used to be that some fishermen would gleefully exclaim that forest fires that kill game animals and birds do little harm to the fish in a stream or pond. What our fishermen friends here fail to understand is that all wildlife — animals, birds, and fish (and humans) — depend upon the proper conservation of water, soil, and vegetation on the land. Repeated burning of the forests and fields fills streams with trash and dirt and dangerous lyes, creating a situation in which many game fish cannot live. It is a fact, repeatedly proven, that well-kept forests retain rainfall and release it gradually, feeding the creeks and streams with a steady supply of pure water.

Every year brings out a new batch of young hunters and fishermen. These newcomers, plus any of the older hunters and fishermen who might have backslid a bit, should learn and observe two basic rules about keeping fire out of the forest. One, don't bring fire to the forest yourself; and, second, report any fire you see to a fire warden or to any other responsible party who can get assistance to help put the forest fire out. Some additional suggestions are: put your camp fire DEAD OUT before you leave your camp site. Run your fingers through the ashes of your fire to make sure that your fire is really DEAD OUT. Another hint, when you want to smoke, stay in one place until you have finished. Don't go hiking through the forest smoking and cascading sparks like a flame-throwing dragon. Sit down, smoke up, and put the butt out—DEAD OUT!

Remember! When you burn a forest, you destroy the trees, burn soil, kill the wildlife and take away its livelihood. Forest fires muddy your streams and turn an all-year even flow to one of alternating flood and desiccation. Your fishing cannot be good in that kind of stream.

Before leaving a campfire, water down well and make sure no live coals are present by running your fingers through the ashes.

Remember, too, that the essence of wildlife management is to provide wildlife with the kind of environment that it needs. Certain game birds are strict in their requirements for food, nesting places, cover. If they cannot get what they need, because of fire, perhaps, they move on to where they can, or they die. Animals, birds and fish vary in their adaptability to changes in environment. Crows and rabbits, for instance, are very adjustable creatures. Quail are less adaptable, and the ivory-billed woodpecker is extinct due to its exacting environmental requirements. The list could go on and on illustrating the degree of adaptability of various kinds of wildlife. Wildlife, in numerous ways, resemble us humans—some of us can conform to change; some cannot.

Animal life has a tough enough time getting along as it is under present conditions. Let's not add forest fires to their troubles.

At campsites clear away a spot to the bare soil before building a fire.

Commission Starts Fluvanna Lake

Word from G. W. Buller, chief of the Commission's fish division, says that the contract for the new public lake in Fluvanna County, near Palmyra, was awarded on April 1 and that work on the 67-acre lake has been started. This will add another large body of water for public fishing and is in keeping with Commission policy of building lakes in areas with a minimum of existing public fishing water.

New Commission ponds have been built or acquired in the following counties: Mecklenburg, Pittsylvania, Powatan, Halifax, Brunswick, and Fauquier.

How Serious is the BOBCAT in Virginia?

By DON PROGULSKE
Former graduate student, V. P. I.

SPORTSMEN often complain that bobcats are responsible for shortages of grouse and turkey and even squirrel and deer. Those hunters who have chanced upon a carcass recently fed upon by a bobcat—or wildcat as they are sometimes called locally—or turkey hunters who have attracted a bobcat while trying to yelp up turkeys are the ones who are most firmly convinced that the wildcat is *really* a serious predator. Such individuals are the ones who call most loudly for the control, or even the extermination, of the bobcat in the interest of game conservation.

Before it is possible to determine the status of any flesh-eating animal such as the bobcat we must know something about the animal in question. Before we can reach an intelligent decision on the status of the bobcat we should have information on where bobcats are found in Virginia, how many there are, if they are increasing or decreasing in numbers, how big they grow, what they eat, and something about their private lives. A recent study made by the Wildlife Unit at Blacksburg supplied a considerable amount of information on the bobcat and his relations to other wild animals. A few of the facts brought to light by this investigation may be worthy of mention.

Well, what about bobcats anyway, where do they legally fit in with our game and other wild animals? The Virginia game code lists them as "an undesirable wildlife species" (Pg. 62, Par. 29-132). Listed as such the game code gives them little protection and they may be killed at any time. Several counties have even set bounties against them, believing this would keep local populations low.

Are bobcats still so numerous in the state that they need to be controlled? Present information indicates that they probably are not; this is one thing that has changed. Before Virginia was settled and during her colonial days bobcats were probably more abundant than at present. Since the colonial period, forests have been pushed back to make way for cities, towns, and farms. This has pushed the bobcat back to the mountain tops, where rugged terrain has balked man and his machines.

These changes had their effects on the bobcats. We find now that most of the bobcats are located in the more rugged and secluded sections in some forty-odd counties of the state. A few live in the Dismal Swamp in Nansemond and Norfolk Counties. The Alleghany, Massanutten, and Blue Ridge Mountains seem to be the best 'cat territory. The Barbours Creek section of Craig County, Poor Valley in Bland and Tazewell Counties, parts of Augusta County, the Alleghany Mountain which runs through Highland, Bath, and Alleghany Counties, the Massanutten Range, and parts of Wise, Lee, and Scott Counties in southwest Virginia seem to hold the greatest bobcat concentrations.

We can't count all of the bobcats in Virginia. We can, however, make a fair guess at their numbers by first determining the size of the natural range and then the average density of bobcats in this area. By mapping the range in individual counties we find there are about 11,000 square miles of bobcat range in Virginia (or about one-fourth the area of the entire state). Field observations, trapline data, and bounty claims indicate that there is a density of about one bobcat for about every four-and-one-half square miles of range. Divide the total range (11,000 square miles) by four-and-a-half, and you get a total bobcat population of about 2,500, not an awful lot but a sizable population. We must not forget that though this is a guess, it is based on as sound reasoning as possible.

A closer look shows why the mountains are particularly adapted to bobcat living. Here we find excellent dens in many rocky outcrops and in countless hollow snags and trees. Animal life is abundant, especially where forests are broken by trails, roads, and occasional openings. Thus, the bobcat has both the shelter and the food he needs for survival. His numbers are probably restricted by many natural factors (litter size, breeding, diseases, etc.) and to a lesser extent by man's guns and traps.

The breeding season of bobcats starts around the first of January and extends into late May. Some bobcats might even breed during the summer months. Kittens

are born about two months after their parents have successfully mated. As many as five young may be born at one time, but litters of two or three are more common.

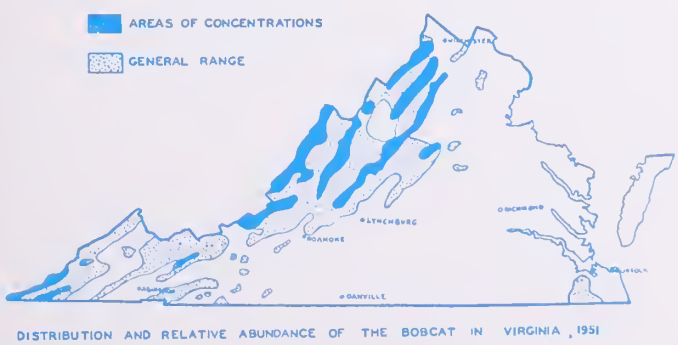
Just how big do our bobcats grow? We frequently hear stories of fifty and sixty pound bobcats being killed and "when hung over your shoulder their noses scrape the ground"! Those are big animals in any man's language, and have likely grown in the telling. Measurements of bobcats collected during the recent study show the true size of these animals. The average female weighs about 16.5 pounds. Males average 23 pounds, and an exceptionally large one killed in Highland County weighed 40 pounds.

As for "noses scraping the ground"—well, the forty-pounder was the longest 'cat measured and scaled 40 inches from the base of his tail to the tip of his nose. An unusually large female was 34 inches long. And what about those tails? Some people say females, which they call "wildcats," have tails as long as a housecat: while the males they call "bobcats" have shorter tails. Actually, both sexes are properly called either bobcat or wildcat, and the tails of either sex seldom grow longer than seven inches.

The predatory effects of any animal show up in the food he eats. An excellent way to learn what he eats is to look for remains of his prey in his stomach, intestines, and droppings. The indigestible hair, bones, feathers, nails, and claws of the prey are easily recognized. Eighty stomachs and 125 droppings of bobcats collected in Virginia and North Carolina in 1951 and 1952 were examined to determine what bobcats in the region normally eat.

These examinations reveal that the bobcat is an opportunist and will eat most anything which crosses his path, be it skunk, woodchuck, or rattlesnake. Over 25 different animals were identified in the food remains. Rabbits and gray squirrels occurred most often. Deer, opossum, meadow mouse, and other small mammals were also common. Very few song birds were found, and game birds were entirely absent from the material examined.

These examinations don't tell the whole story. There are reliable reports indicating that wild turkey, domestic poultry, and sheep are occasionally included in some bobcats' diet. Also, the relative abundance of our wild animals makes a difference; the more plentiful ones become the staple bobcat foods. Right now, in Virginia, this is the condition we find: rabbits and gray squirrels seem to be the most important foods, and are probably captured alive. Deer is commonly eaten, but this is a different matter: deer becomes a major food only after the hunting season, when many dead and crippled deer are left in the forests. Seldom do we find a true case of



The bobcat population in Virginia is given as 2500 animals.

Only under special conditions is bobcat control necessary.

Food habits of Virginia and North Carolina bobcats based on occurrence as indicated by 233 samples which included 124 scats, 57 stomachs, and 50 intestinal tracts, collected from January 1951 to March 1952.

		No. of times occurring	Occurrence by per cent
Cottontail rabbit	*Sylvilagus floridanus*	87	37.3
Grey squirrel	*Sciurus carolinensis*	58	24.3
Deer	*Odocoileus virginiana*	40	17.4
Field mouse	*Microtus pennsylvanicus*	26	11.1
Unidentified bird		16	6.9
Opossum	*Didelphis virginiana*	15	6.5
Woodchuck	*Marmota monax*	12	5.4
Fox squirrel	*Sciurus niger*	8	3.4
Various grasses		8	3.4
Chipmunk	*Tamias striatus*	7	3.0
Deer mouse	*Peromyscus sp.*	6	2.6
Flying squirrel	*Glaucomys volans*	6	2.6
Raccoon	*Procyon lotor*	5	2.1
Red squirrel	*Tamiasciurus hudsonicus*	5	2.1
Insects		5	2.1
Unidentified mammal		5	2.1
Striped skunk	*Mephitis mephitis*	3	.1
Flicker	*Colaptes auratus*	3	.1
Pine mouse	*Pitymys pinetorum*	2	.09
Redbacked vole	*Clethrionomys gapperi*	2	.09
Rattlesnake	*Crotalus horridus*	2	.09
Grey fox	*Urocyon cinereoargenteus*	2	.09
Wood rat	*Neotoma magister*	1	.04
Ruby-crowned kinglet	*Regulus calendula*	1	.04
Unidentified shrew		1	.04
Unidentified snake		1	.04
Cardinal	*Cardinalis richmondi*	1	.04
Mole	*Parascalops breweri*	1	.04
Unidentified snail		1	.04

bobcat predation on a healthy deer. Other foods more easily captured are more attractive to a hunting bobcat.

We might now gather together all our evidence and decide just how "destructive" or "undesirable" our bobcats might be. We have estimated there are hardly more than 2,500 bobcats in all Virginia. We have seen that their low reproduction rate and other factors tend to keep their populations at a relatively low level. Furthermore, we have learned that the greater bulk of wild animals eaten by bobcats are the more numerous species (game or nongame) and the useless weak or dead. Only an occasional bobcat becomes "destructive," "undesirable," or bothersome, and only he should be reckoned with. In short, bobcats as a whole have little detrimental effect on our total game populations. They should be set free from the restrictions of the past by some means that would protect the bulk of the animals that do no harm, while providing ways to stop the occasional individual that does become destructive.

THE NORTH AMERICAN WILDLIFE CONFERENCE

The Twentieth North American Wildlife Conference, held last March 14, 15, 16 in Montreal, Canada, at the Sheraton-Mount Royal Hotel, drew some 1500 wildlife biologists and conservationists from each of the 48 states in the United States and from all ten provinces of Canada. Virginia was well represented. The Game Commission was represented by Messrs. Quinn, Phelps, Shomon, and Kellner; the V. P. I. Wildlife Research Unit by Drs. Mosby and Lindzey.

Dr. Ira N. Gabrielson, president of the Wildlife Management Institute, Washington, D. C., presented the opening address and Hon. Jean Sesage, Minister of Northern Affairs and Natural Resources, Ottawa, welcomed the delegates to Canada.

The North American Wildlife Conference is the largest and most important annual international conservation meeting in North America. This year there were 57 general and technical papers pertaining to all phases of our renewable natural resources presented by foremost authorities in their field.

In conjunction with this conference were related meeting of 19 other established societies and associations from the United States and Canada.

The printed transactions of the conference, containing all accepted papers with discussions and index, will be available at $2.75 per copy, U. S. currency, postpaid. Orders may be placed by writing the Wildlife Management Institute, Wire Building, Washington 5, D. C. Up-to-date information and research on pertinent game and fish problems are included in the transactions.

Some of the highlights of the conference were included in the general session on the first day with a review of the last twenty years of progress in the resource use field. Papers were presented on the accomplishments in the field of soil conservation, water management, forest and range management, and wildlife training and research.

The technical sessions were well attended and were headed by known experts in the various conservation branches. Session number one included papers dealing with disease, nutrition, and controls in animal populations. Session number two was devoted to wetlands and inland water resources. Other sessions included well prepared papers on upland game resources, marine coastal and fur resources, big game resources and conservation information opportunities. Current problems and future needs in the resource field were aired.

Administrators and biologists from the Atlantic Flyway, Mississippi Flyway, Central Flyway, and the Pacific Flyway gathered to discuss waterfowl flyway management problems.

The conference offers an excellent opportunity for the states and provinces to exchange ideas and information and to pool their knowledge, not only for the betterment of fish and wildlife but for the improvement of all of our renewable resources on the North American continent.

"The strength of our nation is due to the continent of North America. It has molded us, nourished us, fed its abundant vitality into our veins. We are its children, lost and homeless without its strong arms about us. Shall we destroy it?"—*Stuart Chase*

Entrance marker to the picturesque wild area in the George Washington National Forest.

Ramsey's Draft

By MRS. THOMAS R. NELSON

A certain amount of virgin wild land is necessary if we are to appreciate nature as it was in primitive times. You will find some semblance of this condition in this natural area.

DURING the past decade the average American has been given the opportunity to enjoy more leisure. This is certainly not a novel idea What is novel, or perhaps remarkable, is that in this age of machines, extra noise and confusion and haste, man's love of trees and the beauties and wonders of nature has not been smothered. This is evidenced by the endless streams of automobiles leaving the metropolitan areas each weekend, a determined desire to see "America the Beautiful," and to enjoy the peaceful relaxation of the hinterland.

With each weekend the problem of the evacuation of cities becomes a greater responsibility to the Virginia Forest Service, the United States Forest Service, and other conservation services striving to meet the growing needs for recreation. And, most important of all, comes the added problem of educating the public in the "wise use" of our natural resources.

On the surface, combining weekend travelers with conservation may seem a little far-fetched, but conservation can be taught in a subtle way. The setting aside of unique areas where nature is left undisturbed for people to see is one way to teach conservation.

Travel on the Valley Pike in days gone by, when toll bridges loomed up at frequent intervals and roads and motors were such that blow-outs and unexplained engine complications caused frequent delays, was quite an undertaking. Today the Valley Pike provides comfortable traveling. Winding between the Blue Ridge and Shenandoah Mountains, it is still the "Pride of Virginia." Known to many only as U. S. 11, it splices a vast agricultural basin. Though considered the "Grand Tour" by the same folk who are attempting escape, many pass within arm's length of spectacular mountainous country, missing scenic experiences in the mountains of the million-acre George Washington National Forest.

To the west of Valley Pike on U. S. 250, the Appalachian Mountains unfold endlessly back into West Virginia. About 25 miles west of Staunton, on the same route, a well-marked sylvan sanctuary can be found—Ramsey's Draft. Here, years ago stood the Mountain House, a stage stop for the weary traveler. Here too hunters lodged during the days of plenteous game when even buffalo could be seen in the lush valleys.

A good forest road, established in 1935, leads into the Ramsey Draft wild area. Driving up the road, Long-

A rumbling trout brook marks the main water course through the area.

Huge, towering hemlocks line the Ramsey's nature trail.

fellow's poem becomes real, for hemlocks 350 years old reach 150 feet into the sky. This area guards 1794 acres of forest land that has never been cut over—one of the last stands of virgin hemlock and white pine in Virginia.

Three quarters of a mile from the turn at Rt. 250 is the Ramsey's Draft nature trail, maintained since 1940 by the Augusta Garden Club in cooperation with the United States Forest Service. Another rustic sign plainly marks the entrance to the path which winds through the majestic maples, tulip poplars, white and red oak, and other types of massive hardwoods. The trail soon reaches Ramsey's Draft itself, a busy little mountain trout brook, and one of the headwaters of the Calf Pasture River. It was named for James Ramsey, a Commissioner of Revenue, and an early settler. This sparkling stream is so shallow that its frequent flat stones covered with dainty bluets afford an easy crossing. More than a hundred varieties of wildflowers and herbs flourish, including the wake robin, which is said to get its whimsical name from the blooms which appear before the arrival of the robins. A sheer cliff formed from jagged, lichen and fern-covered rock rises on one side of the trail and makes a spectacular sight. At the top a small stone marker tells the sad tale of the Civil War soldiers who died from an epidemic of small pox in the area. Thickets of mountain laurel bloom profusely and sturdy fingers of club moss interlaced with partridge berry carpet the forest floor. Overhead songbirds of many species chirp their annoyance at being disturbed over your presence in what truly is a nature lover's haven.

Each spring U. S. Forest Service personnel go over the Ramsey's Draft area to put the area in shape for visitors. Old signs must be either straightened or replaced, for in some cases the local bears have made a strange hobby of bending and twisting and wrecking the structures. Trails are cleaned and the whole area is put in neat shape.

Near the exit of the trail a sturdy bridge recrosses the stream and shortly the road, bright with sunshine, shocks the walker from his reveries by the cool, quiet greenery of the flower-draped countryside. This experience alone is worth a spring visit.

Approximately six miles up the road is the *head of the hollow*. The Appalachian Trail follows the mountain tops from Maine to Georgia and here it forms a connecting link. Close by is a shelter for "Mountain Trampers," and "Peak Grabbers," fitted and furnished with dry wood by the last persons to occupy it. Trail hikers are to be admired, for they are folks who have truly learned how to enjoy nature on foot. Big Bald Knob, 4200 feet—the highest peak in the area—has trails maintained on three sides by the United States Forest Service, and the breathtaking panorama view is worth seeing.

The national area illustrates an excellent example of virgin forest retained for the purpose of science, research, education and enjoyment. If you want to see real natural beauty, why not plan a trip to see it?

Leave the beaten path and find that *"the best things are nearest, and peace among silent hills and shelter of forests"* are here for all to admire and enjoy.

TROUTING (Continued from page 9)

If you don't mind mountain driving, take Route 250 west from Staunton, keeping a sharp lookout for the brown-and-yellow Forest Service rustic sign proclaiming that here is Ramsey's Draft, a dream of a mountain brook stocked with speckled trout and rainbows of goodly size. Somewhere along the rocky banks of this turbulent mountain torrent lies the skeleton of a monster rainbow, long since a meal for prowling mink or drifting owl. I caught him one foggy, rainy day, and brought him to creel after a sullen, tugging battle worth every mile of the trip to reach him.

Safely in my creel, I thought, he bumped at my hip for an unknown period as I jumped from rock to rock on my way down the brook to exhibit him to skeptical companions. Presently, I paused to rest—and to admire once again my wonderful fish. Alas! The creel fastenings had broken, the creel itself was upside down, and the trout was lost. Truly, he was the biggest fish . . .

Think you that all trout in Virginia are stocked? No, indeed! Does your mouth water for fingerlings fried whole, crisp and brown? Virginia decrees that all trout, regardless of size (except in the National Parks), are legal, and many mountain trickles in the southwest part of the state teem with brilliant native fish—none of great size, it's true, but all of indescribable succulence. The lightest of tackle is called for here, and the bait for your tiny hook is under the rocks and in the bear-ripped, rotted stumps bordering the nearly vertical trails.

And again, monster square-tails, products of no hatchery, inhabit streams the existence of which is never known to the motorist passing daily within actual casting distance. Trickling through alders and willows, scarcely deserving to be called brooks, concealed from tourists and even eagle-eyed sportsmen by thick hedges of underbrush, these little runs widen occasionally to deep, clear pools wherein live hungry speckled trout of noble size. These favored spots are never found by the week-end angler, but if you prove yourself to be a real sportsman, win the respect of those to whom these places are known, and honor their confidence, then one great day you may be among the elect to count among your treasures the location of a secret hole, without which no trout fisherman is worthy of his calling.

New Virginia Predator Control Position

By JOHN C. JONES

Assistant District Agent, Branch of Predator and Rodent Control, Fish and Wildlife Service, U. S. Department of the Interior

The Virginia Commission of Game and Inland Fisheries, in cooperation with the Virginia State Department of Agriculture and Immigration and the Fish and Wildlife Service of the U. S. Department of the Interior, has initiated a program for state-wide predator control. The program included establishment of a new position of biologist who will be responsible for predator control activities within the state. One of the major objectives of this project will be the control of rabies among wildlife, in order to reduce serious economic losses to agriculture and the danger to human life caused by the presence of this disease. Reduction of direct losses to livestock and poultry due to the predation of wild and feral animals will also be a function of the project. The work will be supervised by the Fish and Wildlife Service in accordance with plans agreeable to the three cooperating agencies.

Mr. F. Nelson Swink, Jr., has been appointed Mammal Control Supervisor to fill the position. Mr. Swink graduated from the University of West Virginia in 1949 with a Bachelor of Science degree in Forestry. He studied wildlife management at the Virginia Polytechnic Institute and received his Master of Science degree in that subject in 1952. Since then he has been employed by the Maryland Game and Inland Fish Commission. Mr. Swink is quite familiar with the problems in this area and is particularly qualified for the position, since his graduate research consisted of a study of foxes and fox populations in Virginia.

Mr. Swink's headquarters will be in Harrisonburg, Virginia, where office space is being made available in the Federal Building by the U. S. Forest Service. He will work with counties, local agencies, organizations and other cooperators, and will assist in the organization of local programs. He will attend meetings and give demonstrations, explaining program objectives and teaching suitable control techniques. Requests for his services should be made far enough in advance to allow ample time for scheduling.

Editor's Note: Those wishing to call on the services of Mr. Swink may write him direct as follows:

F. Nelson Swink, Jr.
Mammal Control Supervisor
Federal (Post Office) Building
Harrisonburg, Va.

or contact either Mr. Jones of the U.S.F.W.S., Dept. Interior, Washington, or the Virginia Game Commission, Richmond, Va.

Claims a Bigger and Better Bass

Mrs. Elwood Hicks, of Fredericksburg, read about Mrs. E. F. Norris's 7-pound bass in a recent issue of *Virginia Wildlife* and has a positive answer to our query about whether a bigger bass has been caught by a feminine angler in Virginia.

"I am proud to report," she writes, "that on September 27, 1946, I caught a 9-pound and 4½-ounce largemouth bass in a pond at Heathsville, Virginia. When measured the bass was found to be 27 inches long. I caught this fish about 5 o'clock in the afternoon on a bamboo pole with a very small minnow. With a long pole, it was difficult to land it immediately, so I held the pole and kept the line tight until I tired the fish out and then I landed it safely. It took me about 15 minutes."

Mrs. Hicks says that two years before her husband had caught a bass only a few ounces less than her big catch. "We both have them mounted." she says.

Missouri Rabbits to Help French

The Missouri Conservation Commission has sent 36 Missouri cottontails by air to the French ministry of agriculture for experimentation to combat the dread myxomatosis which threatens to wipe out the European rabbit population.

The impact of the virus infection has had serious repercussions on the French economy. Close to seven million dollars' worth of hunting revenue has been threatened and related industries such as sporting arms and ammunition manufactures have been affected. Rabbit has been a popular item in the French diet and its lack is also felt in the fur-felt industry.

V.A.F.T.A. Spring Trials

Parke Brinkley's *Dymack* was the winner and Dr. M. W. Perry's *Triggerland Frank* was the runner-up in the spring trials of the Virginia Amateur Field Trial Association. The three-day trials took place at Guy H. Lewis, Jr.'s *Hawfield Farm,* formerly a demonstration area of the Game Commission, on March 21, 22 and 23.

Field trial winners.

Experts considered it one of the best trials ever held with splendid quality dogs. During the three days 49 coveys of birds were put up. Only one brace of dogs out of 18 failed to find coveys, despite high winds and rain. The others found one to six coveys per brace of dogs.

When Bass Bite Best

Studies made by Dr. Glenn Gentry in Tennessee indicate that bass bite best when the water is about 72° Fahrenheit. As the temperature went above or below that point, the fish were more and more reluctant to take food. When the water temperature went above 82° few of the large bass used in the experiment would take any food. So it might be a good idea to borrow the baby's bath thermometer and take it along in your tackle box.

Record Timber Harvest from National Forests

The timber harvest from national forests of 2,300,974,000 board feet between October 1 and December 31, 1954 was the largest for any three-month period in the history of the Forest Service. Value of the timber was $25,071,110.

Ira J. Mason, chief of Timber Management for the Service, says outlook for the year ahead is good. Incidentally, since this is the 50th anniversary of the Forest Service, he noted that for the whole year 1905 the national forest timber cut was 68,475,000 board feet, with an estimated value of $85,597.

Texas Trades Wild Turkeys for Aoudad Sheep

Texas has traded 52 turkeys trapped in the Canadian River bottoms and traded them to North Dakota for 15 head of Aoudad sheep which had come to that state via the Hearst Ranch in California.

The foreign breed of game animals which have a general resemblance to the desert Big Horn sheep, will be released in Palo Duro Canyon, southeast of Amarillo, as an experiment. Big Horn sheep, native to far west Texas, have been decreasing because of curtailed habitat by the encroachment of domestic sheep, pressure of civilization, and prolonged drought.

The Aoudad variety, which originated in the Barbary coast area of Africa, is accustomed to weather extremes and arid conditions and will "eat about everything." The males have a wide curled horn. The sheep have been successfully introduced into New Mexico and have proved resistant to diseases of domestic sheep as well as adaptable to climatic changes.

Nation's First Salt Water Hatchery Planned

Preliminary plans for the first salt water fish hatchery in the nation have been submitted to the Texas Game and Fish Commission. The proposed project is designed to shorten the present research program in marine fish life "by as much as 20 years."

"Plans for the salt water hatchery call for a minimum of fifteen ponds," says Executive Secretary H. D. Dodgen. "They will provide conditions resembling natural marine habitat so that constant studies may be made under ideal conditions. Our technicians believe that the present research program may be shortened by as much as 20 years by using the hatchery facilities to study the habits, life cycle and ecology of the various species concerned."

Studies will also be made in the pollution field, on the rate of growth of reefs, and various ponds will be allocated to oysters, different species of shrimp, crabs, redfish, trout, snook and other forms of marine life.

War Against the Red Tide

Secretary of the Interior Douglas McKay has allotted an additional $33,000 to expedite the Fish and Wildlife program to combat the red tide on Florida's west coast. The money will be used to charter planes and vessels and to purchase chemicals for large-scale control experiments. Additional personnel also will be needed to analyze scientific data which is accumulating rapidly.

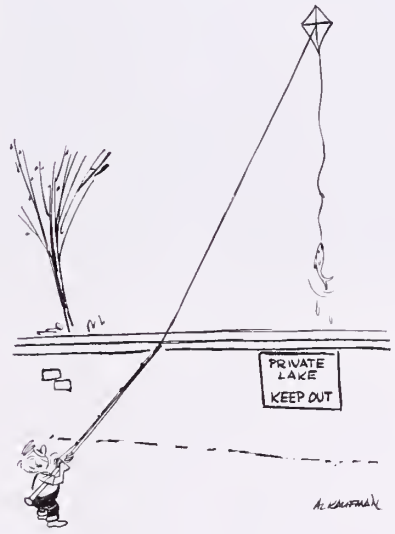
The additional funds are available under terms of the Saltonstall-Kennedy Act which is designed to give special aid to the American commercial fishing industry.

During the last two years the Service has intensified its efforts to determine the combination of environmental factors which "trigger-off" blooms of *Gymnodium brevis,* the minute marine organism which causes extensive fish kills in waters along the Gulf coast.

One striking research discovery has been that metallic copper in extremely small quantities is exceedingly toxic to the tiny marine organism. After further experimental work, metallic copper in the form of large screens and possibly copper ore tailings will be tried on a field scale to determine its control effectiveness as a substitute for the more expensive copper sulphate.

What's In A Name? Partridge Takes Lynx

Up on Moosilauke Mountain in Sunapee, New Hampshire, a Partridge bagged a big cat, which sounds offhand like a reversal of the natural order of things. Alvin Partridge, of Sunapee, while hunting found where a lynx had crossed the trail and let his dogs go on the cold track. Partridge believes the lynx must have taken about 15 miles in a circle before the dogs jumped it. The big cat weighed in at 32 pounds.



Whoopers to the North

The last 21 whooping cranes in the world took off from the Aransas National Wildlife Refuge in Texas after what Refuge Manager Julian Howard described as "a quiet and uneventful winter." Early in the season an aerial survey disclosed that all 21 whoopers were on the refuge which comprises the Blackjack Peninsula. The next air observation showed that four had moved over to Matagorda Island. Howard surmised the change was prompted by the presence there of some favored aquatic food.

"Discipline among the many visitors who, for the first time, were able to observe the whooper range from a concealed tower, was very good," Howard reported.

Nine Educational Leaflets Now Available

Nine educational leaflets are now available in the series being published progressively by the Commission of Game and Inland Fisheries. The leaflets are designed to fit three-ring 7 x 9 inch looseleaf binders for greater convenience in use.

Included in the series so far are booklets on Virginia's state bird, the cardinal, and state flower, the dogwood. Those already published on game birds and animals deal with the beaver, the cottontail rabbit and the bobwhite quail and others are already being planned on birds and mammals.

Four others are "Suggestions for Sportsmen's Clubs," "Your Game Commission, What It Is and What It Does," "Suggestions for Teaching Conservation," and "When You Build Your Fish Pond."

Experiment in Prairie Chicken Management

The Wisconsin Conservation Department is undertaking a prairie chicken management experiment in which scattered small tracts of grassland are being acquired and kept in permanent sod to provide the kind of habitat the pinnated grouse must have to nest and rear its young.

If the program succeeds, it may show the way to preservation of the species in Minnesota, Missouri, Illinois and other states where it is threatened by farming pressures. Modifications of the plan might also be used in the Dakotas, Nebraska, Kansas and Oklahoma.

The Wisconsin plan is being carefully watched by the National Wildlife Federation's committee on the prairie chicken, established two years ago to seek methods of halting the decline of the species which was one of America's most populous game birds three-quarters of a century ago.

"The chief virtue of the plan," Dr. Fred Hamerstrom points out, "is that it will do the job without the necessity of buying up the whole area.

Maymont Wildlife Project

Mrs. Enders Dickinson III, chairman of the committee appointed by Mayor Haddock last spring to report on the proposed wildlife project in Maymont Park to City Council, says that the planning commission has approved the character, location and extent and has fixed the site in the northwest section of the park. It also voted to include the project in the capital improvement fund.

The next step will be to insure that the item will appear in the City Manager's budget and then be approved by the City Council. All the other initial steps have been completed and only this item for maintenance by the city remains to be settled. This would involve $7,500 for salaries, veterinary fees and food for the Virginia animals which the Game Commission will supply as they become available. A privately contributed capital outlay fund of about $15,000 is already available for the project.

Mrs. Dickinson says that the program would be started modestly with a naturalist and custodian and expanded as popular support and demand indicate, with activities coordinated by a qualified naturalist. She was appointed chairman of the Mayor's committee because of her connection with the sponsoring organization, the American Association of University Women, which has been stimulating interest in the establishment of a nature center in Maymont Park. It is hoped that such a center will prove of great educational value and enjoyment to young people and also serve as a focal point of family activities and interest.

Game Manager Commended for Heroism

Gratton P. Fisher, game manager on the George Washington National Forest since 1947, recently received a letter of commendation from Regional Forester Charles L. Tebbe, of the United States Forest Service, for heroic service during a forest fire.

"It was not until a lapse of nearly a year," writes Tebbe, "that I learned of the wonderful presence of mind you displayed and your initiative and judgment on the Hickory Knob fire of November 1, 1953 which averted a tragedy of unparalleled magnitude in this region.

Gratton P. Fisher, game manager on the George Washington National Forest.

"As I understand the situation," continues Tebbe, "you were leading a crew of 15 local high school boys in building a fire line from the top of the Alleghany Mountain westward to cut off a fire which threatened the George Washington National Forest. At 4:00 p.m. . . . in the normal course of building and backfiring a line to effect the cut-off, the area ahead of you and down slope seemed literally to explode. You found yourself and crew facing a very serious situation with the prospect of perishing in the conflagration. Your crew became panicked, and you displayed the presence of mind and courage which broke the panic. The intensity of the blow-up did not permit you to retreat along your line to where your backfire was less intense but you skillfully led the crew members through a hot section of your backfire to safety. Not only did you lead your crew into the safe area but you carried two members who had fallen from exhaustion . . .

"For this extraordinary action you have earned first the gratitude of the boys and their parents for averting a terrible tragedy, and that of the entire community. I find words inadequate to express the feeling of the Forest Service for your outstanding performance in this instance . . . and in my opinion climaxes the accomplishments of the National Forest Warden system . . .

". . . It may be of some satisfaction to you to know that this is in the process of being made into a case history study in *Safety* for the National Forests in the Region . . ."

Self-Hunting Dogs a Menace to Game

The Commission of Game and Inland Fisheries' field staff has been making observations during the past several years on the effects of uncontrolled and self-hunting dogs in Virginia. From evidence and observations made it is believed in some of the mountain counties the number of deer destroyed by self-hunting dogs is equal to or greater than the number killed by hunters.

It is well known that in some counties of the state the Commission has been unable to establish deer herds because of the great number of marauding dogs which destroy planted deer there before they are able to take hold. It is known too that these uncontrolled dogs destroy thousands of mature rabbits and untold numbers of young in the hutch.

Also recognized is the fact that many turkeys and quail planted from the State Game Farm are destroyed by dogs before they go wild enough to protect themselves. Likewise, the self-hunting dogs destroy a great number of ground nesting birds, especially quail, turkeys and grouse.

Wildlife Questions and Answers

***Ques.:* Please tell me if the black bass is the same as the largemouth bass?**

Ans.: Large-mouthed black bass is another common name of the largemouth bass and the smallmouth is also called smallmouth black bass.

***Ques.:* Can you give me some information about raising wild rabbits in captivity?**

Ans.: It is extremely difficult and quite impractical to try to raise wild rabbits in captivity. We know of no reliable information on the subject. Should you, however, wish to try to raise this or any other game animal in captivity it will be necessary to obtain the proper permit from the Commission of Game and Inland Fisheries.

***Ques.:* Is there any law against using luminous and illuminated lures to catch fish in Virginia?**

Ans.: No, there is no law prohibiting the the use of luminous or illuminated lures for fishing in the state.

***Ques.:* Is there any law governing the training of dogs during the closed hunting season?**

Ans.: Yes, there is a law requiring a permit from the Game Commission and the period for such training is between September 10 and October 1st of any year. Such permits are only issued on certain conditions, since there may be a possible conflict of local ordinances concerning dogs running at large.

***Ques.:* Please tell me the size of the world's record rainbow trout.**

Ans.: The world's record rainbow trout was caught in the state of Washington in 1914. It weighed 26½ pounds and was 42 inches long. Many in Virginia waters measure as much as 20 inches in length.

***Ques.:* Please tell me what colleges in Virginia teach wildlife conservation and forestry?**

Ans.: Virginia Polytechnic Institute, at Blacksburg, is the only college in Virginia, though there are a number of such schools in the country.

***Ques.:* What is the maximum and what is the minimum acreage for a shooting preserve?**

Ans.: The maximum acreage which may be acquired for a shooting preserve is 500. There is no minimum.

***Ques.:* Can you give me the names of some of the good trout fishing streams in Virginia?**

"Where can I get a babysitter?"

Ans.: Yes, among those considered tops by trout fishermen are White Top Laurel in Washington County; Big Stoney in Giles; Cowpasture in Alleghany; Piney in Amherst; Tye in Nelson; Jennings Creek in Botetourt; Bullpasture and Jackson rivers in Highland County; Back Creek in Bath; Rapidan in Madison; and the Dan and Smyth rivers in Patrick County.

***Ques.:* Does the Commission distribute multiflora rose seedlings?**

Ans.: No, the Commission does not distribute multiflora rose seedlings, but it would be well to ask your county agent and county soil conservationist how best they may be obtained.

***Ques.:* What kind of a bird is the cherry-bird?**

Ans.: The cedar waxwing is sometimes called cherry-bird because of its fondness for cherries and also cedar-bird because it gorges itself on ripe blue cedar berries. It feeds on a great variety of edible small fruits. Mulberries, of which it is particularly fond, may be planted near an orchard to divert the cedar waxwing from more useful kinds of fruit. It is a valuable insect-eater.

***Ques.:* Can you identify for me the fish sometimes referred to as the goggle-eye?**

Ans.: Yes, goggle-eye, red-eye and rock sunfish are alternate common names for the rock bass (*Ambloplites rupestris*, Rafinesque). Similar in appearance to the warmouth, the rock bass can be distinguished from other fishes of this family by 6 spines in the anal fin and 11 spines in the first dorsal fin. A red eye and large mouth are characteristic of both rock bass and warmouth, but the warmouth has only 3 spines in the anal fin. Fins, with the exception of the pelvic fin, are dusky in color. A dark, sometimes indistinct, blotch is found on the tip of the gill cover, the lower cover of which is tipped with white or gold. Pectoral fins are amber, set low, with rounded tips. The fish shows alive with dark mottlings and brassy reflections.

***Ques.:* Does the pygmy salamander occur in Virginia?**

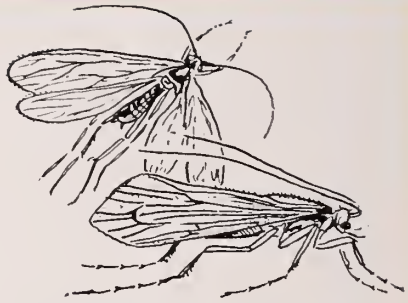
Ans.: The pygmy salamander (*Desmognathus wrighti* King) has been collected on White Top Mountain, Virginia. Its type locality is in the spruce-fir forests of the Great Smoky Mountains in eastern Tennessee; the mountains of western North Carolina and northward to Whitetop Mountain. It is found beneath stones, logs, bark, and moss, usually at elevations of above 5000 feet, but sometimes as low as 3500 feet. This diminutive species attains a maximum length of about two inches.

***Ques.:* Is it true that the female turtle is usually larger than the male?**

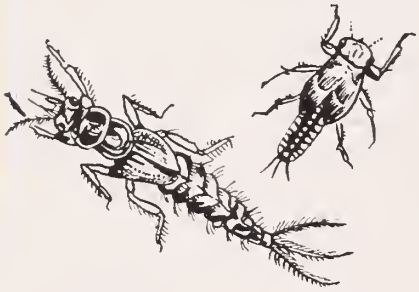
Ans.: Yes, the female is usually larger than the male. Among the soft-shelled turtles, the female is sometimes two or three times as big. In a few species the male has a slight edge in size.

CADDIS FLY LARVAE

BEETLES

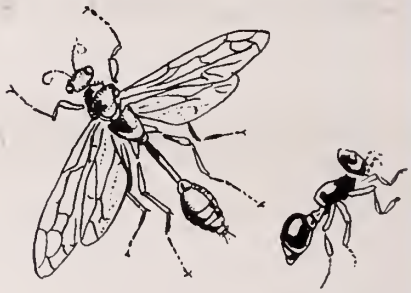


CADDIS FLIES



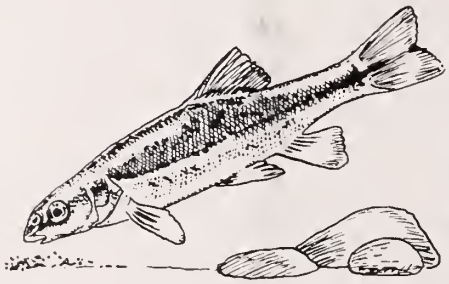
MAYFLY NYMPHS

MAYFLIES



WASPS AND ANTS

STONEFLIES AND NYMPHS



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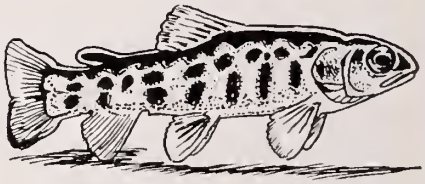
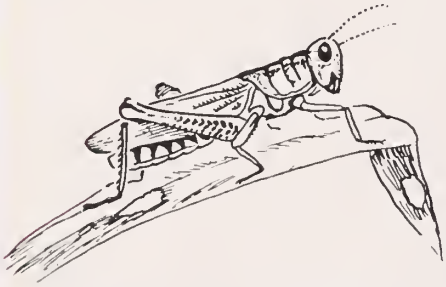


YOUNG TROUT



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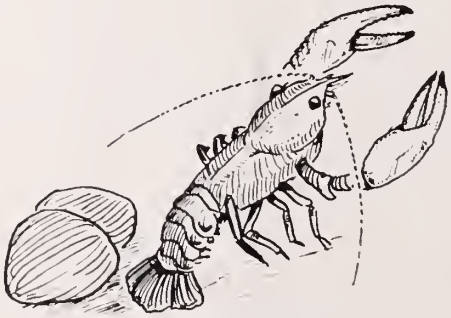

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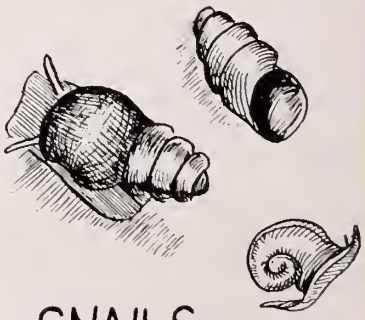

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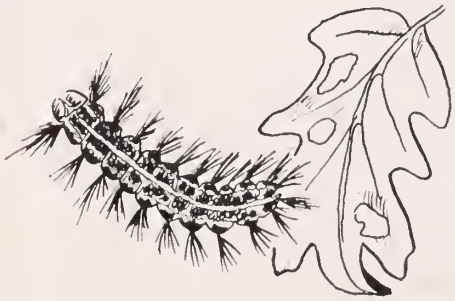
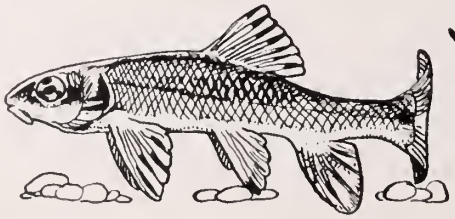


CATERPILLARS



YOUNG SUCKERS

Some Common Trout Foods